

"Still
The Second
Best Thing
About Payday"

The NIH Record

Lefkowitz Gives NIH Lecture On Adrenergic Receptors

By Kathy Kranzfelder

Dr. Robert J. Lefkowitz, investigator of the Howard Hughes Medical Institute and James B. Duke professor of medicine and biochemistry at Duke University Medical Center, will present an NIH Lecture at 3 p.m. on June 13 in Masur Auditorium. He will speak on "The Adrenergic Receptors," which interact with adrenaline and noradrenaline and play important roles in regulating heart rate and blood pressure.

Lefkowitz and his collaborators have defined much of what is now known about the molecular structure, mechanisms of action and regulatory properties of receptor molecules that couple to guanine nucleotide regulatory proteins (G proteins). G proteins are the intermediaries between hormone receptors and effectors.

"Most of what we can learn about adrenergic receptors is true for other receptors," he said. Understanding receptors, the gateways into cells, is important in developing therapeutic drugs. A drug must first attach to a targeted cell's receptors before it can effect its intended biological action. The more specific a drug is to a cell and its receptor, the more predictable its effect and the fewer its side effects.

Lefkowitz's research has dramatically
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Scientists Near Gene for Resistance to Malaria Drug

By Laurie Doepel

Scientists have narrowed the search for the gene that confers resistance to the drug chloroquine, the mainstay of malaria treatment, to a small region of DNA on the malaria parasite's seventh chromosome. This discovery, reported by researchers from NIAID in the mid-April issue of the *Proceedings of the National Academy of Sciences*, is a major step forward in scientific efforts to regain the upper hand against the parasite.

A few decades ago, world health officials were optimistic that malaria, which strikes 200 to 300 million people each year throughout the world, might soon be eradicated through use of the newly discovered drug chloroquine and concomitant use of insecticides like DDT. Numerous successes were scored, some quite dramatic. In Ceylon, for example, the number of malaria cases fell from millions in the early 1950's to only a handful in the early 1960's.

But cutbacks in control programs coupled with the emergence of DDT-resistant mosquitos and chloroquine-resistant parasites began eroding the hard-won gains of earlier days. Today, chloroquine-resistant strains of malaria have emerged as a formidable problem in Southeast Asia, Africa, and South America, contributing to a dangerous resurgence in cases and more than 2 million deaths per year.

Ironically, the reversal has come about in part because of the dramatic success of chloroquine. When first introduced in the 1950's, chloroquine was hailed as a near-perfect synthetic drug—inexpensive, highly effective against both the deadly and less virulent forms of the disease, and so nontoxic that it could safely be given to pregnant women, children, and the elderly. The drug quickly became the treatment of choice, and widespread usage ensued.

But widespread use of chloroquine put tremendous selective pressure on the organism. By destroying drug-sensitive strains of the parasite, chloroquine allowed a resistant strain to establish a foothold in the late 1950's and over time, gradually flourish.

"The problem is tremendous," said Dr. Thomas E. Wellem's of NIAID's Laboratory of Parasitic Diseases, senior author on the paper. "We were in the Amazon on a collaborative project last year, and I was astounded to see that the drug could not be used at all. Every case was resistant, to the point that they don't even bother using the drug any more. The situation in Thailand is similar."

While newer drugs such as Fansidar, mefloquine, and halofantrine, and the old standby, quinine, have become the second-line alterna-

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Meeting the Challenge: NCNR Marks Five Years at NIH

By Esther McBride

In marking its fifth year at NIH, the National Center for Nursing Research is celebrating its progress and planning for the challenges of the future. "The establishment of the national center has created many new opportunities to build depth in nursing science and to develop clinically relevant and scientifically rigorous information to guide nursing practice," says Dr. Ada Sue Hinshaw, the center's first permanent director.

"Research conducted and supported by NCNR is determining ways in which nurses and other caregivers can promote health and prevent disease, understand and mitigate the effects of acute and chronic illnesses and disabilities, and improve patient care as well as the environment in which it is delivered."

In partnership with the academic and practicing communities, NCNR is identifying crucial health questions for nursing research priorities. The first NCNR research priority report, *HIV Infection: Prevention and Care*, was issued recently. Additional priority areas include: the prevention and care of low birth weight infants; prevention of HIV infection as

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Nurse researchers are developing ways to improve care for low birth weight infants.

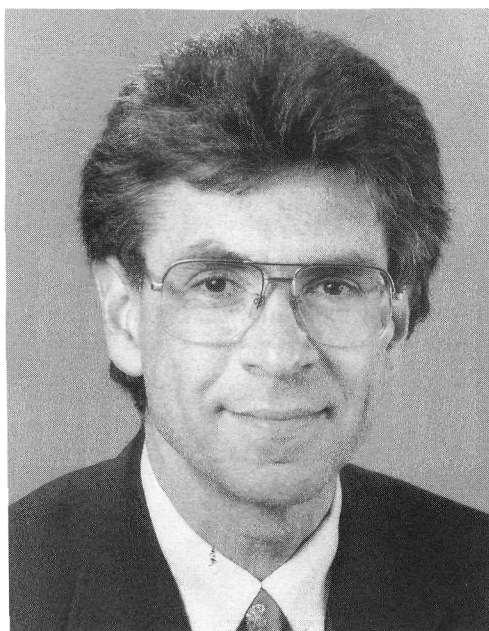
LECTURE

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changed how new drugs are designed and tested, leading to more selective drugs for such diseases as hypertension, congestive heart failure and asthma.

Among his accomplishments, he has found that epinephrine, a drug commonly used to stimulate the heart in a cardiac arrest emergency, impairs the function of adrenergic receptors, thus decreasing the drug's own effectiveness. In the course of elucidating the molecular mechanisms of this drug- and hormone-induced desensitization, Lefkowitz discovered a new enzyme, known as beta adrenergic receptor kinase. He found that this enzyme phosphorylated the beta adrenergic receptor, one of the several subtypes of adrenergic receptors, only when it is occupied by a stimulatory agent (such as epinephrine). This discovery may explain the activation and immediate desensitization observed in the above and other systems.

As a clinical associate in the National Institute of Arthritis and Metabolic Diseases from 1968 to 1970, Lefkowitz laid his own foundation to his current adrenergic receptor studies. He and colleagues Dr. Ira Pastan of NCI, and Drs. Jesse Roth and William Pricer, demonstrated directly for the first time the existence of hormone receptors on target tissues, with the measurement of ACTH receptors on adrenal tissues. This seminal work showed the essential role of cell surface receptors in activating cells and showed that there are rapid changes in the number and avidity of receptors in response to changes in



Dr. Robert J. Lefkowitz

the environment and in disease states. The concept of cell surface receptors represented an entirely new way of understanding the action of hormones on target cells.

Lefkowitz has been on the faculty at Duke University since 1973. He received a B.A. in chemistry and an M.D. from Columbia University. After completing staff training in internal medicine at Columbia, he came to NIH as a clinical associate for 2 years. He then completed a residency and 2-year Harvard Medical School fellowship at Massachusetts General Hospital. □

Seminars on Imaging Offered

Recent advances in imaging sciences have important implications for the future of clinical, biomedical and behavioral research. "Frontiers in Imaging Sciences," is the focus of a new series of seminars designed to provide information on these latest developments. The speakers have been selected to promote an exchange of ideas among participants and to encourage interdisciplinary research collaborations. The first two seminars will be held from 8:30 to 10:30 a.m. in Lipsett Amphitheater, Bldg. 10.

On June 11, Dr. Paul Lauterbur of the University of Illinois will speak on "Pushing the Envelope: Magnetic Resonance Imaging and *In Vivo* Spectroscopy at High Resolution and High Fields, and with Highly Curious Methods."

Dr. Stanley Baum of the University of Pennsylvania will speak on "Recent Advances in Diagnostic Imaging" on July 23.

The seminars are sponsored by the National Center for Research Resources and the National Cancer Institute in collaboration with the Clinical Center's diagnostic radiology department. To preregister, call 496-2992. □



Nine-year-old Christopher Mark Dulman (second from l), the 1991 National Asthma and Allergy Poster Child, visited NIH as part of his Washington, D.C., tour to highlight National Asthma and Allergy Awareness Week, May 5-11. At NHLBI, Chris and his parents Matthew (c) and Maureen (l) Dulman of Lincoln Park, MI, met with Robinson Fulwood (r), coordinator of NHLBI's National Asthma Education Program, and Dr. Suzanne Hurd (second from r), director of NHLBI's Division of Lung Diseases. One of 3 million American children with asthma, Chris spent his first 5 years suffering through poorly controlled asthma attacks and emergency hospitalizations. With his asthma now well under control, he plays championship hockey, sings in his school chorus, and maintains A grades.

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Ronald Melzack To Give Kreshover Lecture

By Jody Dove

Man's inborn ability to experience pain, even in an absent limb, is the subject of the 1991 NIDR Seymour J. Kreshover Lecture. Dr. Ronald Melzack, a professor at McGill University in Montreal, will talk about "Memory Mechanisms and Pain" on Tuesday, June 4 at 3:30 p.m. in Lipsett Amphitheater.

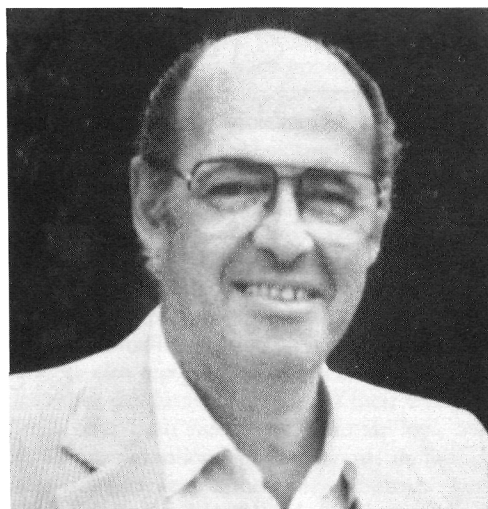
Melzack, who is internationally known for his contributions in the field of pain research, holds the E.P. Taylor chair in psychology at McGill. In 1965, he broke new ground in the study of pain by publishing the gate theory of pain control in *Science*, which has since become a citation classic. Together with Dr. Patrick Wall, Melzack hypothesized that the perception of pain can be modulated by mechanisms operating at several levels of the nervous system. These mechanisms can enhance or inhibit the transmission of nerve signals caused by painful stimuli.

More recently, Melzack has turned his attention to the phenomenon of phantom limb pain. Virtually all amputees who have lost an arm or a leg report the existence of a phantom limb. Not only do these patients continue to feel the presence of the limb over a long period of time, but in many cases, the phantom limb causes considerable pain that is quite real.

According to Melzack, the explanation for phantom limb pain does not lie in nerves located in the area of the missing limb, but rather in the brain. He believes that each person is born with a built-in network of neurons, called a "neuromatrix," which generates all qualities of experience that are felt to originate in the body. Initially, the neural network is determined genetically; later, it is sculpted by sensory input. Melzack argues that the experience of a phantom limb has the quality of reality because it is produced by the same brain processes that underlie the experience of the body when it is intact. For this reason, amputees may experience movement of a phantom limb, coordination of a phantom limb with other limbs, muscle cramping, or even pain from an injury incurred years or decades earlier.

The presence of this inborn neuromatrix is the reason, he believes, why paraplegics with complete spinal breaks continue to experience every quality of sensation in spite of the absence of input from the body. It also explains why even children born without limbs experience vivid phantoms of the missing parts.

In addition to his research in pain transmission, Melzack's interests also include pain assessment and control. In 1975, he developed the landmark McGill Pain Questionnaire, now regarded as a standard measurement device for assessing pain in experimental studies and



Dr. Ronald Melzack

clinical care. The questionnaire provides an objective measure of the subjective experience of pain. Pain is difficult to describe because each person perceives it differently. Moods, emotions, cultural background, and previous experiences influence how people feel and react to pain. Using such words as "stabbing," "flickering," "radiating," "squeezing," and "drilling," the McGill Pain Questionnaire consists of descriptions patients choose to specify their feelings about pain.

Melzack also is known for his strong support of making morphine available to people in severe, intractable pain. Citing the fact that rarely do terminal cancer patients, burn victims, and postsurgical patients become addicted to the narcotics they so badly need for pain control, he has been active in calling for health care givers, lawmakers, and governments to loosen the hold on the distribution of morphine to these patients.

Melzack completed all of his education at McGill University, earning an undergraduate degree in 1950, a master's degree in 1951, and a Ph.D. in 1954. He then held three successive fellowships at the University of Chicago, the University of Oregon Medical School, and the University of Pisa, Italy. Prior to joining the McGill faculty in 1963, he taught at the University of London and the Massachusetts Institute of Technology.

He is a past president of the International Association for the Study of Pain, past honorary president of the Canadian Psychological Association, and vice-president of the International Pain Foundation. Author of more than 200 papers, he is coeditor of the classic *Textbook of Pain*, editor of *Pain Measurement and Assessment*, author of *The Puzzle of Pain*, and coauthor of *The Challenge of Pain*. Melzack also has written and published several award-winning children's books. □

GM Winners To Lecture

Winners of the 1991 General Motors Cancer Research Foundation Awards will lecture on Wednesday, June 12, from 1 to 3 p.m. in Masur Auditorium, Bldg. 10. All three of the awardees are recipients of NIH grants.

Winning the Charles F. Kettering Prize for "outstanding contributions to the diagnosis and treatment of cancer" was NCI grantee Dr. Victor Ling, professor in the department of medical biophysics, Ontario Cancer Institute, and head of the division of molecular and structural biology, Princess Margaret Hospital, Toronto.

The Charles S. Mott prize for "outstanding contributions to the causes and ultimate prevention of human cancer," went to NCI and NIAID grantee Dr. Peter K. Vogt, Hastings distinguished professor and chairman, department of microbiology, University of Southern California School of Medicine.

The Alfred P. Sloan, Jr. Prize for "outstanding basic science contributions to cancer research" was won by NIGMS grantee Dr. Leland H. Hartwell, American Cancer Society research professor in the department of genetics, University of Washington.

Each prize consists of \$100,000 and a gold medal. In addition, \$30,000 is made available to each prizewinner for support of a workshop or conference.

OMS Warns About Skin Cancer

June is Skin Cancer Awareness Month. At all of its health units, the Occupational Medical Service (OMS) is offering educational programs for employees on skin cancer, warning signs, protection and risk factors.

A videotape will be shown on Wednesdays during the month, narrated by Dick Cavett. It will depict what skin cancer looks like, tell how to treat it and suggest how to avoid developing it. The 15-minute film will be shown at 9, 10 and 11 a.m. and at 1, 2 and 3 p.m. in the 6th floor health unit, Bldg. 10.

In 1987, some 25,800 cases of skin cancer were diagnosed, with 5,800 deaths. For answers to questions about skin cancer, contact Inga Tokar, head nurse in the Dermatology Branch, NCI, 496-6421. □

River Tubing Trips Planned

Looking for relief from the hot, humid days of summer? Spend a day with R&W, floating down the Shenandoah River. Due to the popularity of this trip, R&W has scheduled two dates this year—Sunday, July 14, and Saturday, Aug. 17. Trips depart at 10 a.m. from the Shenandoah River Outfitters in Luray, Va. Cost is \$28 per person and includes tube rental and dinner. Sign up at any R&W location or call 496-4600 for more information. □

MALARIA

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tives, resistance to these drugs is emerging as well. The high cost of some of the newer drugs also makes these alternatives prohibitive in resource-poor countries where malaria predominates. "A nightmare for these countries," said Welles, "is that in another decade or so, we'll have nothing in the arsenal against some of these strains."

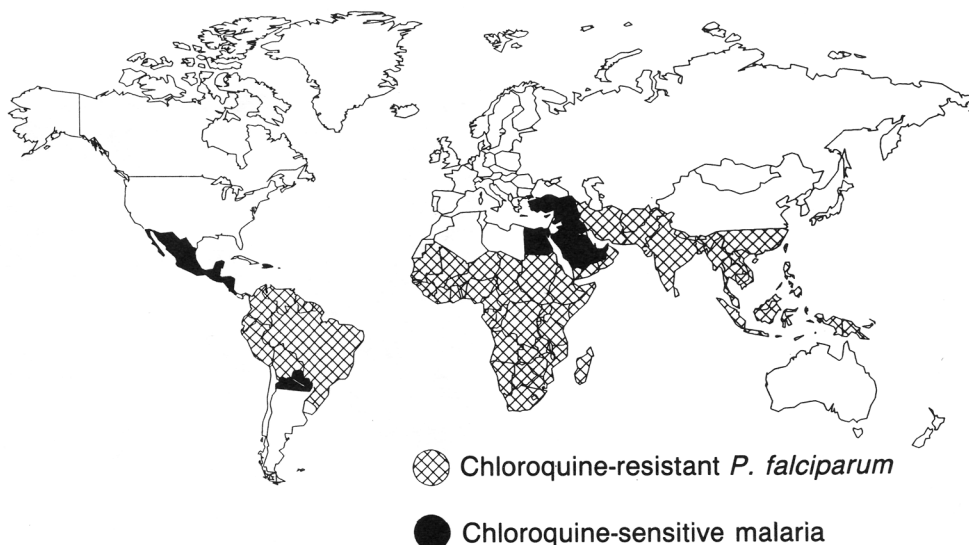
Scientists know that chloroquine-resistant strains of the most dangerous malaria parasite, *Plasmodium falciparum*, prevent accumulation of drug within their cells by expelling the drug 40 to 50 times faster than chloroquine-sensitive parasites. To investigate how the parasite rids itself of the drug so quickly and how resistance has evolved, Welles and his NIAID colleagues conducted an elegant series of classic genetic experiments.

The team first produced a genetic cross between a chloroquine-resistant *P. falciparum* parasite and a chloroquine-sensitive one. The drug sensitivity observed in the offspring would provide clues to the genetic basis of resistance.

Some researchers believed that there must be multiple genes scattered throughout the parasite's genome that govern the resistance mechanism. Contrary to this idea, however, the NIAID experiments showed that the gene governing resistance lies within a single region of DNA on chromosome 7. Even more exciting, the locus itself was only 400,000 base pairs long, or less than 1.5 percent of the parasite's genome. Thus, the area containing the actual resistance gene is much smaller than expected, and the search to pinpoint it should therefore yield quicker results.

The genetic cross was created by mixing the parasites during the sexual phase of their life cycle and then feeding them to mosquitos, in which the parasites would breed. The scientists let these mosquitoes feed on a chimpanzee, and soon after, the chimpanzee developed an infection with the mixed progeny of this cross. After recovering samples of the chimpanzee's infected blood, the scientists began the arduous process of cloning and analyzing the individual progeny from these samples. Out of nearly 100 clones, they found 16 unique offspring, each carrying a distinct mix of genetic material from their parents.

The next step was to determine the degree to which these offspring were resistant or sensitive to chloroquine. By measuring the rate at which they expelled chloroquine, Welles' team determined that eight offspring were clearly resistant and eight clearly sensitive. None had an intermediate response, suggesting that resistance is governed by a single gene. "This gave us hope," commented Welles, "to continue with our analysis." The team then analyzed each of the parasite's 14 chromosomes in more detail using 85



World map showing the 1991 distribution of malaria and the large number of countries where strains of the most deadly malaria parasite, *Plasmodium falciparum*, are resistant to the standard drug of choice, chloroquine. (Source: Malaria Branch, CDC)

genetic markers. The technique they employed has been used to find the genes for cystic fibrosis and for muscular dystrophy.

"When we went through all the chromosomes, there was only one chromosome that showed perfect linkage to chloroquine resistance, and that was chromosome 7," explained Welles. The probability that this pattern of inheritance and linkage to chloroquine response could have come about by chance is less than 1 in 1,000, he said.

Already the search is on for either an effective analogue of chloroquine or a so-called "reversal drug." The latter, whose sole purpose would be to reverse resistance, would be given in combination with chloroquine and could perhaps give the drug a new lease on

life. Other scientists have already found one drug, verapamil, that partially stops *P. falciparum* from ridding itself of chloroquine. But the concentrations of verapamil necessary to achieve this effect in the laboratory would be too toxic to use in people. Several groups of scientists are looking at analogues of verapamil and other calcium channel blockers as potential reversal drugs.

Welles notes that chloroquine resistance is only one example of a generic problem occurring with new antimicrobial drugs. "It's a slow realization, but more and more we are seeing that widespread use of synthetic drugs, while good in the short run, can lead to the emergence of their ineffectiveness." □

Spectrometry Lecture Series Scheduled

A series of seminars on "Mass Spectrometry: Coming of Age in Molecular Biology," will begin June 10 with an introductory lecture by Prof. Donald Hunt, University of Virginia, on "Protein Sequence Analysis: New Methods and Instrumentation." The talk will be held in Lipsett Amphitheater, Bldg. 10, at 2 p.m.

The series, jointly sponsored by NIDDK, NHLBI and NINDS, is designed to bring to the NIH campus noted mass spectrometrists whose research is on the forefront in the sequencing and identification of proteins, nucleic acids and carbohydrates.

"In the last 5 years, dramatic technical advances in mass spectrometry, especially the advent of new ionization methods and extended mass range analysis, have made it possible to provide real assistance to investigators in the molecular and cell biology fields," said Dr. Lewis Pannell, NIDDK, a member of

the committee organizing the series. "Mass spectrometry has been used by chemists and physicists for almost a century to identify atoms and to determine the structure of small organic molecules. Today large biopolymers can be handled and sequence information obtained from small amounts of even impure materials."

Prof. Klaus Biemann, Massachusetts Institute of Technology, will give the second lecture in the series, "The Utility of Mass Spectrometry in Peptide and Protein Chemistry and Structure Elucidation," on July 1 at 2 p.m. in Lipsett Amphitheater. Talks by Prof. Brian Chait, Rockefeller University, and Prof. James McCloskey, University of Utah, are being scheduled for later in the summer.

Further information may be obtained from Pannell, 496-4055.

NIH Consensus Panel Suggests Surgery for Severe Obesity

By Jim Fordham

Gastrointestinal surgery is a therapeutic option for treating severe obesity, according to the 13-member panel of the recent Consensus Development Conference on Gastrointestinal Surgery for Severe Obesity, sponsored by NIDDK and the NIH Office of Medical Applications of Research.

More than 34 million adults in the United States are overweight, and about 1.5 million are severely obese (roughly 100 lbs. or more overweight for an average adult male). Severely obese people are likely to suffer illness and premature death from overweight, according to the panel. They often experience significant psychosocial and economic problems. The biologic basis of the disorder is unknown.

The panel endorsed two surgical treatments for severe obesity—the vertical banded gastroplasty and the Roux-en-Y gastric bypass operation. Vertical banded gastroplasty is a form of stomach restriction in which a small pouch is made by stapling off a large section of the stomach, creating a narrow, restricted pathway to the intestinal tract. The Roux-en-Y stomach bypass consists of a small pouch created at the upper portion of the stomach to which a Y-shaped section of small bowel is attached to serve as an outlet from the stomach to the intestinal tract.

Weight reduction may sometimes be achieved through medically supervised dieting and intensive behavior modification, but when these methods fail, gastrointestinal surgery is a therapeutic option for treating severe obesity.

Improved Techniques Prove Successful

In the last 10 to 15 years, various new surgical procedures have been developed using principles of reduction of gastric volume, intestinal malabsorption, or both. Refinements in these procedures have led to reports of successful results superior to those seen with earlier operations. The conference was held to evaluate the objective evidence for these new techniques.

Risk for morbidity and mortality accompanying obesity is proportional to the degree of overweight. A simple means to define overweight is by the body mass index (BMI). BMI is a value derived by dividing one's weight by the square of one's height. A BMI of 40 kg/m² is roughly equivalent to an 80 lb. overweight for an average adult female. Approximately 1.5 million Americans have BMIs over 40 kg/m². Such patients have clinically severe obesity and are at the highest risk of morbidity and mortality.

The two surgical treatments were recommended by the panel for patients whose BMI

exceeds 40 and who are judged to have a low probability of success with nonsurgical measures. In certain instances, less severely obese patients also may be considered for surgery such as those with life-threatening cardiopulmonary diseases or severe diabetes mellitus.

Significant weight loss as a result of the surgeries usually occurs, and a number of associated disorders—sleep apnea, obesity-associated hypoventilation, glucose intolerance, diabetes mellitus, hypertension, and serum lipid abnormalities—often improve. Many patients also report improvements in mood and other psychosocial aspects of their lives. Death rates from these procedures are low, but significant complications may occur, including leaks from staple or suture lines, diarrhea, persistent vomiting, ulcers, and gallstones. In addition, some patients fail to lose weight from these procedures and may require reoperation.

Benefits of Diets Debated

Limited success has been achieved by a variety of nonsurgical approaches that include medically supervised dieting and intensive behavior modification. Very low calorie diets (VLCD) have been widely publicized as having dramatic success in the treatment of clinically severe obesity. However, in the absence of successful behavior modification, long-term maintenance of reduced weight is unlikely, and patients regain most of their weight within 1 year. These diets alone cannot be considered a reasonable option for achieving permanent weight loss. Combining the VLCD with intensive behavioral modification may have more potential as an effective regimen for treating the clinically severe obese patient. Exercise or some form of increased physical activity is recommended as a component of weight-loss programs.

Drug therapy for clinically severe obesity has been disappointing. Although studies with drugs that reduce appetite suggest short-term benefit, prolonged and sustained weight loss has not been proven with these agents. Drugs such as amphetamines and thyroid derivatives are unsafe and unapproved.

Medical complications of rapid weight loss can occur and are usually treatable. Potential problems with electrolyte abnormalities and cardiac arrhythmias during administration of VLCD generally can be avoided or corrected by the inclusion of high-quality protein and frequent physician surveillance. Recent studies show that rapid weight loss may be associated with a substantial incidence of symptomatic gallstones.

The panel emphasized that deficient nutri-

tion in pregnancy carries a high risk of fetal damage or loss. Women in childbearing years are advised to avoid pregnancy until weight has stabilized postoperatively and micronutrient deficiencies have been identified and treated. Secure birth control methods should be provided for patients during the period of weight loss after surgery. Women who become pregnant following these procedures need special attention. The increased nutritional needs and the normal need for weight gain during pregnancy must be emphasized as part of the obstetrical management of these patients.

Patients seeking therapy for the first time should be considered for treatment in a non-surgical program with integrated components of a dietary regimen, appropriate exercise, and behavioral support and modification. Patients who are candidates for surgery should be selected carefully after evaluation by a multidisciplinary team with access to medical, surgical, psychiatric, and nutritional components. Postoperative care, nutritional counseling, and surveillance should continue for an indefinite period.

Future directions for research include a recommendation that centers be developed that can manage patients with clinically severe obesity. The panel recommended that these patients be entered into controlled studies with long-term followup. The panel also emphasized the need for well-organized clinical trials that address critical issues surrounding surgical procedures, and better vocabulary and nomenclature to standardize terms related to obesity. □



Dr. Joseph F. Gallelli, chief of the Clinical Center's pharmacy department, will receive the Distinguished Alumni Award from Long Island University on June 2. This award for exceptional achievement and scholarship by an alumnus will be presented at the university's Arnold and Marie Schwartz College of Pharmacy's commencement ceremony. Gallelli received a B.S. from LIU in 1957.

NURSING

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well as the care of individuals, partners and families faced with the condition; long-term care of older individuals; symptom management; informatics: support for patient care; health promotion for youth and adolescents; and technology dependency across the life span.

A major challenge facing the center was to develop the highly trained nurse researchers needed to address the complex problems related to patient care. This year NCNR will grant nursing research and research training awards totaling about \$35 million to nursing schools, universities and other institutions across the country. Included are predoctoral and postdoctoral research training programs and career development awards that provide exciting new opportunities for nurses. NCNR is developing a research career trajectory and is using new ways to foster research training for minority nurses.

Collaboration with other disciplines not only enhances nursing science but also demonstrates how nursing science can complement and enhance biomedical research. Collaborating with NIAID, the center has established an intramural program to study ways to minimize dysfunction and suffering from the physical and psychosocial symptoms and side effects associated with HIV and its treatment. One study is documenting decreased appetite, unintentional weight loss and other nutrition-related changes during HIV infection, as well as investigating the causes of these changes. Investigators are also looking at the relationship between nutritional status and immune function. Other NCNR intramural HIV studies concern such issues as compliance with treatment and health-related quality of life.

NCNR also collaborates with NCI on self-care practices in patients with cancer and with NIA on methods to reduce falls in frail elderly. Researchers supported by NCNR and NICHD are targeting the care and prevention of low birth weight infants.

NCNR research also strives to increase our understanding of the cultural aspects of nursing care and how they influence practice. In collaboration with the Agency for International Development and other agencies, NCNR is helping support behavioral research to prevent AIDS in developing countries.

Nursing research is concerned with promoting health, preventing disease and improving care for people with acute and chronic diseases at all stages of life—from helping tiny babies survive to reducing frailty and dependence in older persons. In hospital newborn intensive care units, for instance, studies are aimed at improving care for low birth weight babies. In one study, researchers developed a feeding routine that resulted in faster weight gain and calmer babies in the study group.



Nursing research is committed to finding better ways to help older persons maintain their health and independence as long as possible.

Another NCNR grantee has developed safer ways to perform endotracheal suctioning to clear the airway in preterm babies who have difficulty breathing. The investigator found that the baby's head position during suctioning affected blood oxygen levels and pressure in the skull. Recommended techniques based on this research are being implemented in neonatal intensive care units across the country.

NCNR scientists are also developing better techniques to promote health during pregnancy, and to prevent preterm birth. Investigators are testing a social support system carried out by Black nurse midwives to reduce smoking, alcohol use and other high risk behaviors among pregnant women. Another study includes pregnant Hispanic and Native American women in rural Oregon.

NCNR-supported scientists are also studying babies born to mothers at high risk for infection with HIV, the virus that causes AIDS. Investigators are looking for early signs that may help indicate which infants are infected, so they can get early treatment. They are also studying the psychosocial needs of the babies and their families.

Learning more about the sexual behaviors of teenagers can help nurses, counselors, teachers and parents develop programs to help avoid AIDS and other sexually transmitted diseases. A study of eighth graders in rural Maryland found that 61 percent of the boys and 47 percent of the girls had had sexual intercourse. Cigarette smoking and use of alcohol or certain other drugs were associated with a greater likelihood of sexual activity, but the association varied among subgroups.

Nursing research is also concerned with developing a better understanding of women's

health issues. Urinary incontinence affects 37 percent of women 60 years and older. NCNR grantees found a significant improvement in pelvic muscle strength using exercises requiring gradual, sustained effort in healthy reproductive-age women. Investigators are testing this regimen in older women.

In another study, scientists have identified three patterns of decisionmaking about estrogen replacement therapy, with some women focused on hot flashes primarily, some on both osteoporosis and hot flashes and others concerned about potential side effects. Another project is exploring the effects of ovarian hormones on gastrointestinal structure and function.

In other areas of women's health, scientists are studying ways to promote breast self-examination and to identify risk factors for developing osteoporosis. NCNR grantees are also looking at problems older women face in regaining functional abilities after a heart attack or following a hip fracture.

NCNR-supported researchers are developing better ways to help patients control the symptoms of chronic diseases. Researchers studying patients with noninsulin-dependent diabetes mellitus who believed they could recognize symptoms of low blood sugar found that only 12 percent of the patients could fairly accurately interpret their symptoms. Other studies in symptom management concern measurement of postoperative pain in adolescents and children, and assessing pain in infants.

As the number of older Americans grows, health professionals face new challenges to help them maintain their physical and mental abilities as long as possible. One NCNR grantee is studying the physiological and psychological effects of aerobic training for stroke

patients. This study has the potential to improve recovery by providing better information to nurses, doctors and other health care providers offering rehabilitative care.

The progressive mental and functional impairment of patients with Alzheimer's disease (AD) poses many difficult problems for nursing care. NCNR grantees are testing techniques to improve home care of these patients and to ease the burden on family caregivers. One grantee is assessing mental stimulation techniques that family caregivers can use with AD patients.

Many patients in long-term care facilities are at high risk for developing painful pressure sores. One NCNR investigator is testing a scale to identify patients at high risk of pressure ulcers so that prompt preventive measures can be offered. Another grantee is testing the use of mild electrical stimulation to the surrounding skin area to speed the healing of the ulcers.



Nursing research is concerned with developing a better understanding of women's health issues.

"We have made enormous progress in 5 years," says Hinshaw. "And most important of all, we are helping to ensure that nursing care is based on accurate, tested information, which can improve the health of all Americans." □

NIEHS Accredited by AAALAC

The National Institute of Environmental Health Science's Comparative Medicine Branch, which is responsible for laboratory animal care at NIEHS, achieved success in its recent accreditation visit by the American Association for Accreditation of Laboratory Animal Care. CMB was granted full accreditation with no additional improvements required by the AAALAC council on accreditation.

Laboratory animals are protected by various laws and regulations, but AAALAC sets standards of animal care excellence that are beyond the minimums required by law.

Said Dr. David G. Hoel, acting NIEHS director, "In fulfilling the institute's scientific mission, it is essential that our laboratory animal care and use be the best possible. The results of the AAALAC accreditation visit indicate that these standards are being met." □

NHLBI, NIDDK Funding Urges Two Toward Middle Age

Two New Jersey men recently reached an important landmark—their 40th birthdays. While many people acknowledge turning 40 as a significant accomplishment, these two men have a special reason to celebrate, due in large part to NIH.

Both have a fatal genetic blood disorder called Cooley's anemia. Virtually all those afflicted with the disorder die before age 20.

"The two patients who are now 40-year-olds are living testimony to the wisdom of NIH funding to advance treatment and cure for Cooley's anemia," said Dr. Alan Cohen, acting chief of hematology at the Children's Hospital of Philadelphia and chair of the Cooley's Anemia Foundation's medical advisory board.

Also known as thalassemia major, Cooley's anemia strikes predominantly those of Italian, Greek, Mediterranean and Asian Indian heritage and is found in 60 countries.

The 40-year-olds are the oldest Americans known to be living with the normally fatal anemia. The life-prolonging therapy, funded chiefly by NIH, consisted of a combination of blood transfusions every 2 weeks and nightly 12-hour injections of the iron chelating drug Desferal.

Currently, two NIH institutes place major emphasis on research programs that address the need for an oral form of the iron chelating drug, which patients now take via a battery-operated pump that injects medication intravenously or subcutaneously over a 12-hour period every night.

The National Heart, Lung, and Blood Institute, which has funded Cooley's and related research since 1976, provided funds for research to improve the safety and adequacy of the nation's blood supply and the National Marrow Donor Program—two important components in a Cooley's patient's treatment regimen.

According to Dr. Alan S. Levine, chief of the Blood Diseases Branch in NHLBI's Division of Blood Resources, a special research grant program is now supporting scientists who are investigating the development of iron chelators.

The other NIH institute, the National Institute of Diabetes and Digestive and Kidney Diseases, has been a Cooley's supporter since 1974.

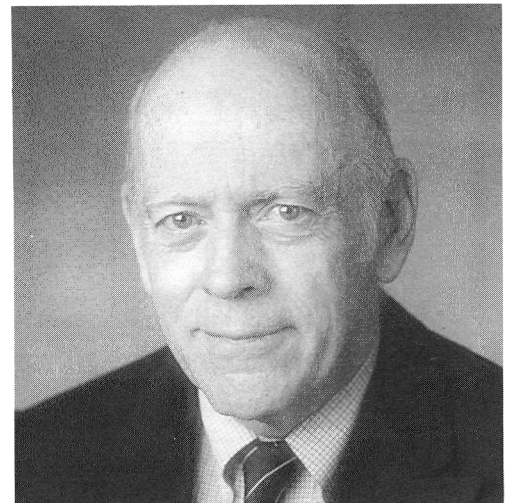
Dr. David G. Badman, hematology program director for NIDDK's Division of Kidney, Urologic, and Hematologic Diseases, said his institute has a special program under which many of the possible oral iron chelating drugs are now being tested.

"Iron chelation therapy in particular has prevented many of the complications that formerly made survival beyond 20 years of age unusual," said Badman. "The birthdays of these patients is a wonderful event for them and a tribute to those who have worked

together to conquer Cooley's anemia."

Hundreds of drugs have been tested during the last 15 years and several now show sufficient promise to warrant further testing.

"Clearly without the combined funding from the NIDDK and NHLBI over the last 17 years," noted Cohen, "and the superb intramural NIH research as well as support of NIH administrative leaders, not only would these patients not be alive today, but patients now being born with this devastating disease would not be able to look to the future with such hope and confidence." □



Dr. Roscoe O. Brady, chief of the Developmental and Metabolic Neurology Branch, NINDS, was recently awarded the Jessie Stevenson Kovalenko Medal by the National Academy of Sciences for his "outstanding and revolutionary work" in the human sphingolipid storage disorders. During more than 30 years of research at NINDS, Brady has identified the enzymatic defects that cause many of these disorders, developed procedures for genetic counseling of individuals at risk, and developed successful enzyme replacement therapy that reverses one such disorder, Gaucher disease.

Science Writers Guild To Meet

The NIH Science Writers Guild is looking for a few new faces and some fresh ideas. The guild is an informal network of writers who meet periodically to hear speakers and share ideas and mutual concerns. Topics presented this past year at guild meetings included writing an eye-catching lead and discussing the impact of new legislation on freelancing activities.

Those interested are invited to join the guild to plan future gatherings and provide guild leadership. The group meets on Thursday, June 13, from 11:30 a.m. to 12:30 p.m. in Bldg. 31, Conf. Rm. 4C32. Call Lauren Ward, 496-8188, for more information. □



NIH deputy director Dr. William Raub, honorary race starter, sounds the gun for the start of 14th annual NIH Institute Relay.



Enthusiastic runner of the female team "Galabs" waves her prize after a successful baton exchange. Galabs' finishing time was 17:44.



Fastest female team "Quick Steps," consisted of (from l) Robin McKenzie, Alison Wichman, Gail Kerr, Kathryn Chantry and Sharilyn Stanley. Their winning time was 15:07.



Third-leg runner (l) of the male team "Human Motor Controllers" concentrates on baton exchange technique. His team finished in 15:11.



Male Master Division team "Running on Empty," featuring (from l) Jerry Moore, Harry Maher, Jack Shawver, Rick Davey and Carl Roth, finished second overall with a time of 13:25.



Winning male "No More Anomalies" completed the course in 12:32. Team members are (top row, from l) Peter Burbelo, Volker Stephan, Pierre Savagner, and holding plaque, Lou Mocca (l) and Sergio Line.

Sunshine, Sizzle and Speed

NIH's 14th Annual Institute Relay

For the first time in 4 years, Mother Nature smiled on NIH's interinstitute run. Or she may have been laughing: Though the humidity was low (it normally rains or has just finished raining), racetime temperatures rose to the low nineties. More than 200 NIH'ers, who competed in the 14th annual Institute Challenge Relay race May 15, were on hand (and foot) to bask in the sunshine.

"It is the combined effort of many generous volunteers that makes this event such a resounding success for the NIH community," said race coordinator Dr. Peter Pentchev of NINDS.

Sponsored by the NIH Health's Angels, the half-mile race around Bldg. 1 drew a spirited crowd of spectators who witnessed veteran NIH relayman Tony Brown run the course in the fastest time ever recorded—2:02.

NIH deputy director and honorary relay starter Dr. William Raub shot the gun to start the first heat, which pitted three female teams against 17 mixed teams. The female team "Quick Steps" won the first heat in 15:07.

In the second heat, nine male teams chased 11 mixed teams. The triumphant male team was "No More Anomalies," which finished the race in 12:32. Mixed team "Nerve Impulse," for whom Brown sprinted the anchor leg, ran the third fastest time of 13:32.

Three Master Division (age 40 and older) teams, two mixed teams and one male team, also completed the race course. The fastest masters were the male team "Running on Empty," who came in second overall at 13:25. Complete team results are listed by category at right; asterisk indicates masters.

Photos: Ernie Branson



Sprinters (from l) Helen Christakis, Tony Brown, Susan Colilla, Dante Richardson and Steve Miller ran the race in 13:32 on "Nerve Impulse," the winning mixed team.

ay Race Run for Fun, Fitness

Team Institute Time

Mixed Division

Nerve Impulse	NINDS	13:32
Roaches	NIH	14:06
Active Sights	NIH	14:16
Dawn's Daniels	NIH	14:48
Pavement Epithelium	NEI	14:55
Safety Striders	OSHB	15:00
Gene Striders	NCI	15:08
Transport Phenomena	NCRR	15:13
Running on Empty	NHLBI	15:16
Norton's Nats	NCI	15:56
Plodding Clotters	CC	16:03
*Mark Buller	NIH	16:09
Normal Deviates	NIAID	16:12
Second Messengers	NIH	16:13
Jose's Horde	NICHHD	16:26
Kid Power	NICHHD	16:27
Jogging Trogs	NIAMS	16:42
Wurtz Possible Runners	NEI	16:45
Chimaeras	NIH	16:57
Derek's Devils	NIDDK	17:13
Slow Paced Pauuffers	DRG	17:14
Bloody Computers	DCRT	17:16
Drugs are US	NIH	17:20
No Name 1	NIH	17:36
Human Gnomes	NCHGR	17:57
*Rembrandts	WW	17:58
Ward's Wards	DCRT	18:24
Traveler's	OD	18:46
Joggers Anonymous	NIAAA	19:07
No Name 2	NIH	20:10

Male Division

No More Anomalies	NIDR	12:32
*Running on Empty	NIH	13:25
Vegemites	NIAMS	13:46
Young Viruses	NIH	14:05
Pseudo Dingo	NIH	14:21
LMOG Flash	NCRR	14:38
Human Motor Controllers	NIH	15:11
Biblios	NLM	15:35
Silent Ischemia	NCI	15:56

Female Division

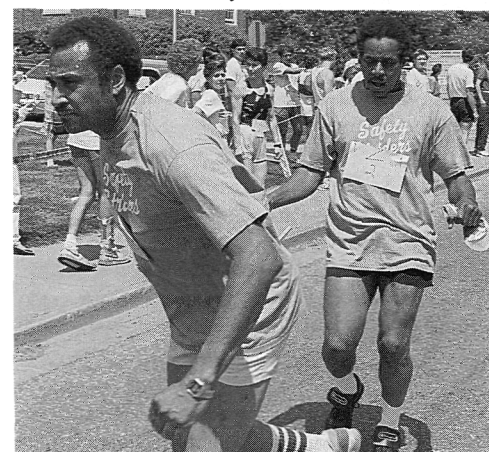
Quick Steps	NIH	15:07
Galahs	NIH	17:44
Vegetables	NCI	18:25



The field was still crowded when Dante Richardson of "Nerve Impulse" pulled ahead in the second of two racing beats. The third "beat" was the 90 degree temperature recorded on race day.



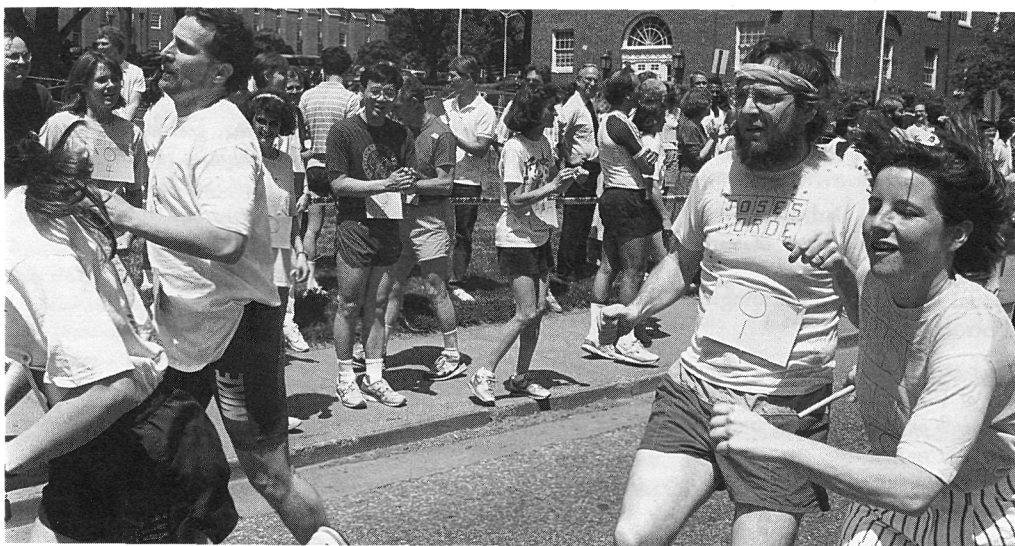
Pat Earl of the winning mixed Master Division team begins her leg of the relay. Her team finished in 16:09.



The number two man of the mixed team "Safety Striders" hands the baton off to his team member to begin their third leg of the race. The striders finished in 15:00.



Mixed Master Division team winners with a time of 16:09 are (from l) Jerry Sisler, Mark Buller and Pat Earl.



Team members (r) from "Jose's Horde" participate in the ever-crucial relay rite of passing the baton.

PHS Honors NIH Employees for Outstanding Achievements

NIH staff members will be recognized for their outstanding achievements and contributions at the 17th annual Public Health Service Honor Awards Ceremony, May 30, in Masur Auditorium. Dr. James O. Mason, assistant secretary for health, assisted by Dr. Antonia Novello, U.S. surgeon general, and Dr. Audrey F. Manley, deputy assistant secretary for health, and Dr. Bernadine Healy, director, NIH, will present the awards.

The following staff members will be recognized for their achievements:

PHS Special Recognition Award

Marlene Baker-Owens

Supervisory Editorial Assistant
Research Documentation Section
Information Systems Branch
Division of Research Grants

"For significantly improving the productivity of the data entry of scientific abstracts through the implementation of Optical Character Recognition equipment and procedures."

Dr. Susan S. DeVesa

Epidemiologist
Biostatistics Branch
Epidemiology and Biostatistics Program
Division of Cancer Etiology
National Cancer Institute

"For description studies of the changing patterns of cancer in the United States which have provided new clues to etiologic factors."

Dr. Lawrence R. Deyton

Medical Officer (General)
Branch Chief, Community Clinical Research Branch
Treatment Research Program
Division of AIDS
National Institute of Allergy and Infectious Diseases

"For providing outstanding administrative leadership and scientific direction in developing the concept of community based clinical trials."

Dr. Monique E. Dubois-Dalcq

Acting Chief, Laboratory of Viral and Molecular Pathogenesis
National Institute of Neurological Disorders and Stroke

"For exceptional service as Acting Chief, Laboratory of Viral and Molecular Pathogenesis, and for research on demyelinating and viral diseases of the nervous system."

Dr. Cherie L. Fisk

Assistant Director for Scientific Affairs
Office of the Associate Director for Research Services
Office of Research Services

"For exemplary leadership in improving the ORS services to the NIH research community by resolving communication differences encountered between service and research staff."

Dr. Judith H. Greenberg

Director
Genetics Program Branch
National Institute of General Medical Sciences

"For exceptional work as Director of the NIGMS Genetics Program and as project officer of the Human Genetic Mutant Cell Repository."

Dr. Mark A. Klebanoff

Medical Officer (Research)
Division of Prevention Research
National Institute of Child Health and Human Development

"For providing important insight into the effect on the fetus of maternal physical activity during pregnancy."

Dr. Vincent C. Manganiello

Chief, Biochemical Physiology Section
Laboratory of Cellular Metabolism
Division of Intramural Research
National Heart, Lung, and Blood Institute

"For original and valuable contributions to the current understanding or regulation of cyclic nucleotide metabolism and molecular mechanisms important in the antilipolytic action of insulin."

Dr. Kouji Matsushima

Visiting Scientist
Division of Cancer Treatment
Biological Response Modifier Program
Laboratory of Molecular Immunoregulation
National Cancer Institute

"For identifying, purifying, genetically cloning and making available in quantity two novel pro-inflammatory cytokines called interleukin 8 and monocyte chemotactic and activating factor (MCAF)."

Dr. John R. Ortaldo

Chief, Laboratory of Experimental Immunology
Biological Response Modifiers Program
Division of Cancer Treatment
National Cancer Institute

"For pioneering studies in the identification, characterization, and regulation of natural killer cells that have provided insight into their biological and antitumor functions."

Wanda J. Pifer

Immigration Coordinator
International Services and Communications Branch
Fogarty International Center

"For sustained and exceptional accomplishment in developing and improving visa support which has markedly facilitated the exchange of scientists between the PHS and foreign institutions."

Lewis S. Pollack

Supervisory Contract Specialist, Contract Management Branch
Division of Extramural Activities
National Institute of Allergy and Infectious Diseases

"For insightful and incisive leadership of the Contract Management Branch of the National Institute of Allergy and Infectious Diseases."

Dr. Mark Schoenberg

Medical Officer (Research)
Laboratory of Physical Biology
National Institute of Arthritis and Musculoskeletal and Skin Diseases

"For outstanding studies of the dynamic interaction between actin and myosin in skeletal muscle fibers."

Dr. Thressa C. Stadtman

Chief, Intermediary Metabolism & Bioenergetics Section, Biochemistry Laboratory
Division of Intramural Research
National Heart, Lung, and Blood Institute

"For distinguished accomplishments as Chief of the Section on Intermediary Metabolism and Bioenergetics."

Dr. Judith N. Wasserheit

Chief, Sexually Transmitted Diseases Branch
Division of Microbiology and Infectious Diseases
National Institute of Allergy and Infectious Diseases

"For providing outstanding administrative and scientific guidance to the STD Branch of the Division of Microbiology and Infectious Diseases."

Group Nomination

"For design and implementation of an innovative, cost saving capitation plan to support clinical research on maternal-fetal and neonatal health."

Dr. Donald McNellis

Health Scientist Administrator (Medical Officer)
Pregnancy and Perinatology Branch
Center for Research for Mothers and Children
National Institute of Child Health and Human Development

E. Douglas Shawver
Supervisory Grants Management Specialist
Office of Grants and Contracts
National Institute of Child Health and Human Development

Dr. Linda L. Wright
Special Assistant to the Director
Center for Research for Mothers and Children
National Institute of Child Health and Human Development

Group Nomination (Productivity)

"For establishing a standard of excellence in the design and conduct of a highly efficient and effective evaluation of the personnel management function at NIH."

Edythe L. Bishop
Patricia J. Childress
Robert T. Dillon
Sue Heidel
Joyce F. LaPlante
Marvin Lee
Diana M. McClelland
Grace M. Taylor
Cynthia D. Vantries
Judy M. Vickers

PHS Superior Service Award

Dr. Heinz W. Berendes
Associate Director for Prevention Research
National Institute of Child Health and Human Development
"For developing and implementing innovative epidemiologic studies in maternal and child health that have demonstrated effective means to reduce birth defects and infant mortality worldwide."

Dr. Harlan D. Caldwell
Microbiologist, Laboratory of Intracellular Parasites
Rocky Mountain Laboratories
National Institute of Allergy and Infectious Diseases
"For outstanding research accomplishments on the immunobiology of chlamydiae."

Robert R. Carlsen
Chief, Contracts Operations Branch
Division of Extramural Affairs
National Heart, Lung, and Blood Institute
"For outstanding contributions in contracts administration in support of the Public Health Service research programs for heart, lung, and blood diseases."

Dr. John E. Coligan
Chief, Biological Resources Branch
National Institute of Allergy and Infectious Diseases
"For sustained outstanding direction, administration and increased productivity of the Biological Resources Branch of the National Institute of Allergy and Infectious Diseases."

Dr. Ruth J. Hegyeli
Associate Director for International Programs
National Heart, Lung, and Blood Institute
"For outstanding contributions in fostering international biomedical cooperation of the Public Health Service program related to cardiovascular, pulmonary and hematologic diseases."

Dr. Alan G. Hinnebusch
Head, Section on Molecular Genetics of Lower Eukaryotes, Laboratory of Molecular Genetics
National Institute of Child Health and Human Development
"For exceptionally insightful studies on global metabolic pathways in yeast, leading to the realization that similar control mechanisms exist in all eukaryotes, including humans."

Dr. John R. La Montagne
Director, Division of Microbiology and Infectious Diseases
National Institute of Allergy and Infectious Diseases
"For exemplary leadership in childhood vaccine research program and scientific guidance of the Division of Microbiology and Infectious Diseases."

Dr. Edward H. Oldfield
Chief, Surgical Neurology Branch
National Institute of Neurological Disorders and Stroke
"For outstanding management of the Surgical Neurology Branch, training of academic neurosurgeons and for advances in understanding the biology of brain tumors."

Constance Lebaire Percy
Health Statistician
Cancer Statistics Branch, Surveillance Program
Division of Cancer Prevention and Control
National Cancer Institute
"For exemplary leadership in developing worldwide standard cancer classification systems, and achieving their adoption and use by the international health community."

ASH Special Citation

Dorothy L. Harrison
Technical Publications Writer-Editor
Advanced Projects Section, Information Systems Branch
Division of Research Grants
"For consistently high performance, creativity, and thoroughness in writing and editing technical documents and for providing high quality support to technical projects."

Beverly A. Hines
Lead Grants Technical Assistant
Office of Review Activities
National Institute of General Medical Sciences
"For consistent commitment and invaluable contributions to the grant review activities of the National Institute of General Medical Sciences."

Valerie P. Katsouros
International Program Specialist
International Services and Communications Branch
Fogarty International Center
"For outstanding support of critical branch operations through efforts to train, orient, and develop staff and for playing an instrumental role in effecting major restructuring."

PHS Volunteer Award

E. Ward Pettis
Budget Analyst
Financial Management Branch
National Institute of Deafness and Other Communication Disorders
"For exceptional commitment and outstanding volunteer service to the Montgomery County Commission on People with Disabilities."

Distinguished Service Medal

Medical Director
Dr. Arthur S. Levine
Scientific Director
Division of Intramural Research
National Institute of Child Health and Human Development
"For exceptional leadership in NIH-wide programs, for developing a distinguished intramural research division, and for important contributions to research on the structural integrity of DNA."

Medical Director
Dr. Barbara L. Packard
Associate Director for Scientific Program Operations
National Heart, Lung, and Blood Institute
"For excellence in science and administration, effective and innovative leadership, and dedication and commitment to the achievement of NHLBI, NIH, and PHS goals."

Medical Director
Dr. Ronald H. Schwartz
Chief, Laboratory of Cellular and Molecular Immunology
National Institute of Allergy and Infectious Diseases
"For contributions to the understanding of T cell developments, tolerance induction and responsiveness."

(Continued from Page 11)

Medical Director
Dr. John D. Boice, Jr.
Chief, Radiation Epidemiology Branch
Epidemiology and Biostatistics Program
Division of Cancer Etiology
National Cancer Institute

"For outstanding achievements in directing an international epidemiologic research program that has advanced our understanding of cancer risks following radiation exposures."

Medical Director
Dr. Roger J. Porter
Deputy Director
National Institute of Neurological Disorders and Stroke

"For exceptional career service displaying unique scientific and managerial skills in directing multidisciplinary research programs in Neurological Disorders and Stroke."

Meritorious Service Medal

Medical Director
Dr. Harvey R. Gralnick
Chief, Hematology Service
Clinical Pathology Department
Clinical Center

"For outstanding contributions to biomedical research in hematology, commitment to excellence in clinical teaching, and development of a hematology consultative service for patients."

Medical Director
Dr. Robert T. Simpson
Chief, Laboratory of Cellular and Developmental Biology
Division of Intramural Research
National Institute of Diabetes and Digestive and Kidney Diseases

"For contributions to science over the last two years and for exemplary leadership as Chief of the Laboratory of Cellular and Developmental Biology."

Dr. Ronald G. Crystal
Chief, Pulmonary Branch
National Heart, Lung, and Blood Institute

"For visionary research in the pathogenesis and treatment of destructive, inflammatory and immune lung diseases, and his role in experimental and clinical molecular medicine."

Medical Director
Dr. Mark Hallett
Clinical Director
Director, Clinical Neurosciences Program
Division of Intramural Research
National Institute of Neurological Disorders and Stroke

"For success in administrative management in clinical and research areas, and for progress in understanding human motor physiology in health and disease."

Medical Director
Dr. Eric A. Ottesen
Head, Section of Clinical Parasitology
Laboratory of Parasitic Diseases and Laboratory of Clinical Investigation
National Institute of Allergy and Infectious Diseases

"For outstanding clinical research on the immunopathogenesis, immunodiagnosis and treatment of filarial infections."

Dr. Neal S. Young
Chief, Cell Biology Section
Clinical Hematology Branch
National Heart, Lung, and Blood Institute
"For contributions to understanding the pathogenesis and treatment of bone marrow failure syndromes, specifically the role of viral infections in disrupting hematopoiesis."

Medical Director
Dr. Michael J. Horan
Associate Director for Cardiology
National Heart, Lung, and Blood Institute
"For sustained, highly significant achievement in program direction and research administration."

Health Service Officer
Thomas C. Voskuhl
Assistant Director for Program Planning and Operations
Division of AIDS
National Institute of Allergy and Infectious Diseases

"For important contributions to the establishment and expansion of the Division of Acquired Immunodeficiency Syndrome, NIAID."

Dr. Harry R. Keiser
Clinical Director
Chief, Hypertension-Endocrine Branch
National Heart, Lung, and Blood Institute
"For basic contributions into an understanding of the mechanisms of hypertension and for providing stable, responsible and effective clinical direction to the Intramural Research Program."

Medical Director
Dr. Carl M. Leventhal
Director, Division of Demyelinating, Atrophic, and Dementing Disorders
National Institute of Neurological Disorders and Stroke

"For exceptional leadership displaying unique scientific and managerial skills in directing a multidisciplinary research program in demyelinating, atrophic, and dementing disorders of the nervous system." □

Maddox Named Program Deputy

Dr. Yvonne Maddox has recently been named deputy director of the NIGMS Biophysics and Physiological Sciences Program. She has been a health scientist administrator in that program since 1985, handling research and research training grants in the area of trauma and burn injury.

Prior to joining the NIGMS staff, Maddox was a research assistant professor in the department of physiology and biophysics at Georgetown University Medical Center. From 1981 to 1983, she was an NIH postdoctoral fellow at Georgetown involved in research on the role of eicosanoids in pulmonary vascular reactivity. Maddox obtained her Ph.D. in



Dr. Yvonne Maddox

physiology from Georgetown University for research on the regulation of vascular tone by prostacyclin.

Maddox has received many awards, including the 1990 PHS Special Recognition Award and the 1990 NIH Director's Award. She is active in several NIH organizations, including the Staff Training in Extramural Programs (STEP) committee, the digestive diseases interagency coordinating committee, and the PHS/NIH nutrition coordinating committee. She is also the chair of the board of directors of the Center for Development and Population Activities, which provides access to health and family planning information and services to women and families in Third World countries. □

Patient Activities Chief Arnold Sperling Retires, Yields 'Key'

By Ellyn J. Pollack

Hints: He has been at the Clinical Center for 30 years. His staff increased 10-fold under his supervision. He started out as a section chief and his program expanded to a department. He retired Apr. 30.

Arnold Sperling, director of the CC's patient activities department, passed on the key to the Clinical Center at his retirement party last month. The silver key mounted on a wooden plaque is held by the person who has been a CC department chief the longest. To whom Sperling passed the key is a secret.

When Sperling joined the hospital as chief of the patient activities section in 1961, he was expected to provide "recreational diversions" for patients. But Sperling wanted to do more than merely distract the patients. He saw an opportunity to help them cope with illness and hospitalization, adjust to handicaps, deal with stress and anxiety, learn new skills and relearn old ones. As a result of his initiative, the program was granted department status more than 20 years ago.

"Patients and staff became aware of the value of recreation as part of biomedical research, which led to the status of becoming a department," Sperling recalls.

"The field of recreation has gone through tremendous metamorphosis in the 30 years that I have been here," he says. "The profession renamed itself 'therapeutic recreation.' The program could no longer be entirely diversional, but had to become more clinically oriented, and the therapists had to be more accountable. Today, recreational therapists assess patients' needs, establish treatment goals and plans of action, and write progress notes.

"We do not go in and just provide crafts and games," Sperling explains. "If we provide crafts and games, there has to be a purpose. Recreation is not just hit and miss anymore. The therapy is well thought out."

While the entire patient activities department program is therapeutic, it is not all necessarily therapy, he explains. There are still extensive diversional activities for patients and their families such as sightseeing, movies, parties, and dance classes. This is still a very important aspect of the department.

"When I first came here," recalls Dr. Saul Rosen, acting CC director, "I was struck by Mr. Sperling's comment that patient activities was like an oasis in a desert of patient boredom. He has always gone out of his way to see that there was activity for patients here, and the patient activities department has been vigorous over the years. Whenever there was any type of seasonal activity, Mr. Sperling was always there. He's a hands-on guy. He has never stopped his ceaseless activity to get patients active, alert and entertained during their stay at the Clinical Center. He's a



Arnold Sperling

unique resource."

Of all the accomplishments in his 37-year career with the government, Sperling is most proud of the growth and professional advancement of his department. When the recreation therapists began getting involved in nursing units and multidisciplinary teams more than 20 years ago, the program began to expand. As a result, requests for recreational therapy services increased.

Reflecting back over the years, Sperling says that if he were to start his career today, he would choose the same profession.

"I have always been in a creative and cultural spectrum," he says. "Recreation therapy gave me an opportunity to work with people, especially handicapped people. It also gave me an opportunity to transmit my creativeness toward other people and to act as a leader. I do not think there is another profession out there that would satisfy all of those needs."

Thirty-eight years ago, Sperling worked as an actor touring the country. After 1 year, he quit acting because of the day-to-day uncertainty of employment, and accepted a position as a recreation specialist at a Veterans Administration hospital near Waukegan, Ill. But his heart always remained in the theater. When he came to NIH, he was active in the Hammers (now known as the NIH Theater Group), directing several musical productions until 1965.

During his career, he won numerous awards from the National Recreation and Park Association, the Maryland Recreation and Park Association, and the National Therapeutic Recreation Society (NTRS). Most recently, he received the distinguished service award from NTRS. In addition to his professional awards, he received special recognition from the NIH Blood Bank for donating more than 10 gallons

of blood. He has donated 11½ gallons—or 93 pints—during the past 28 years.

During retirement, Sperling plans to keep busy through volunteer community service programs and community theater. "It's time to close one chapter in my book and start another." □

Vet Branch's Pierson Mourned

Richard L. Pierson, who retired from NIH in 1985 after 26 years of service in the Veterinary Resources Branch (VRB), DRS (now part of the National Center for Research Resources), died Apr. 14 at his Bethesda home. Burial was in Arlington National Cemetery.

At the time of Pierson's retirement, the national capital area branch of the American Association for Laboratory Animal Science renamed an award in his honor. It is given annually to the outstanding senior laboratory animal technician in the area as judged by an awards committee.

"Dick Pierson was an invaluable employee who contributed much to increasing the overall quality of the care we provide research animals and the training of animal care personnel," said Dr. Robert A. Whitney Jr., NCRR director. "He was widely admired and respected."

Pierson received a B.S. degree in agriculture from Ohio State University in 1942, focusing on animal husbandry.

As a Marine Corps officer in the Pacific theater during World War II he commanded a tank platoon in four invasions—the Marshall Islands, Saipan, Tinian, and Iwo Jima—receiving two Purple Hearts and the Bronze Star with Gold Star. Severely wounded on Iwo Jima, he underwent lengthy hospitalization for spinal injuries and retired from the Marine Corps Reserve in 1946 as a captain. He was able to walk only with severe difficulty, but overcame this disability with courage that was an inspiration to his friends and coworkers.

In the mid 1950's, Pierson underwent a series of operations and lengthy outpatient treatment at Bethesda Naval Hospital to increase his mobility. Determined to make use of his college training, he obtained a position at NIH as an animal husbandman.

Pierson ably performed increasingly responsible positions in VRB, including 10 years as assistant chief of the animal production section and 10 years as chief of the ordering and contract unit of the small animal section.

He is survived by his wife Mary P. Pierson and his sister Seena Jane Adams.

Sailing Club Holds Open House

Old salts and landlubbers alike are invited to the R&W Sailing Club picnic and open house, to be held Saturday, June 29 (rain or shine) from 10 a.m. to 5 p.m. at Selby Bay Sailing Center in Edgewater, Md. The event is free to R&W members and will include food, drink, and boat rides in the club's 19-foot



Members of the NIH Sailing Club enjoy the breeze in one of the club's Flying Scots. The club will hold an open house June 29 in Edgewater, Md.

Flying Scot sailboats. Fall sailing classes begin in August; this is a good chance to preview the boats and meet members before signing up. Maps/directions and Sailing Club brochures are available at the R&W Activities Desk in Bldg. 31. □

Attention COSTEP Candidates

The commissioned officers section, DPM, will be inprocessing the summer COSTEP (Commissioned Officer Student Training and Extern Program) candidates on the following days:

Friday, May 31, 2-4 p.m., Bldg. 31, Conf. Rm. 7

Wednesday, June 12, 2-4 p.m., Bldg. 31, Conf. Rm. 8

Friday, June 14, 2-4 p.m., Bldg. 31, Conf. Rm. 10

Monday, July 8, 9 a.m.- 12 p.m., Bldg. 31, Conf. Rm. 4

Thursday, July 11, 2-4 p.m., Bldg. 31, Conf. Rm. 9

Questions concerning this matter should be directed to the commissioned officers section, 496-4212. □

Bike Club Sponsors Rides for Spring, Summer

The NIH Bike Club has scheduled a number of bike rides for the spring and summer session. Anyone is welcome to join these Saturday morning rides, which have been scheduled about every 2 weeks up until Sept. 21. Along with the regular road-type rides there have also been scheduled two mountain bike rides and one ride for the family/kids.

A description of any of the rides can be obtained by contacting the bike ride leaders listed below. The purpose of these rides is to have fun, get exercise, enjoy the environment, and make new friends. However, please

observe the following rules: For your safety, helmets are required; if you plan on attending a ride, please notify the ride leader; ride leaders assume no liability for bike problems or bike accidents; if inclement weather arises, it will be up to the ride leader to cancel the ride.

If you have a question concerning a specific bike ride, call the ride leader. Questions of general nature should be directed to Mike Mitas, NIH bike ride chairman (w 496-4811; h 869-5714).

Schedule of Bike Club Rides Phone Number (all area codes 301)

Date	Leader	Work	Home	Description
June 1	Kathy & Dave Meyer	330-1464	231-5586	Ellicott City Tour
June 15	Jacque Ferrante	496-1288	680-2273	Brookeville Tour
June 29	Don Plugge	725-5501	750-8825	Ellicott City or NIH/Great Falls
July 13	Larry Hamacher	496-6442	230-4520	Great Falls Mountain bike ride
Aug. 10	Rick Danenburg	725-5501	776-0003	Triadelphia Tour
Aug. 24	Rick Troxel	496-4823	330-8126	Sugarloaf Tour
Sept. 7	Gene Shearer & Mago Clerice	496-5464 496-5464	656-8986 564-1307	Riley's Lock/ White's Ferry Mntn. bike ride
Sept. 14	Larry Hamacher	496-6442	230-4520	Westminster Tour
Sept. 21	Mike Mitas	496-4811	869-5714	Rock Creek Park/Zoo kids ride

Chamber Players Offer Concert

The NIH Chamber Players will present a lunch-time concert on Thursday, May 30 at 12:30 p.m. in Lipsett Amphitheater, Bldg. 10. The group, composed of NIH employees and alumni, will play a Mozart quartet and Schubert trio. Refreshments will be served following the concert. The NIH Chamber Players are sponsored by FAES and all are invited to attend the concert. □

Weight Watchers at NIH

Registration for the next session of Weight Watchers at NIH will be held Friday, June 7 at noon in Bldg. 31, Rm. 11A10. Meetings will be held Fridays, beginning June 14, from noon to 1 p.m. The 10-week session costs \$120 for new members (payable upon registration) and includes program materials, weekly meetings and musical entertainment. Current Weight Watchers members and lifetimers who are over goal can join at a discounted rate of \$105. Special foods are not required to participate.

No one will be allowed to sign up before or after June 7. Class size is limited to 30 and registration will be on a first-come, first-served basis. For more information, contact R&W, 496-6061. □

Hopkins Offers \$10,000 Prize

A national search for computer-based applications to assist persons with physical or learning disabilities is being conducted by Johns Hopkins University. A grand prize of \$10,000 and more than 100 other prizes will be awarded for the best ideas, systems, devices and computer programs. Entry deadline is Aug. 23.

To obtain a flyer giving details of the competition and how to participate, write to: Computing to Assist Persons with Disabilities, Johns Hopkins National Search, P.O. Box 1200, Laurel, MD 20723. □

Adolescent Subjects Needed

The Clinical Neuroendocrinology Branch, NIMH, and the Developmental Endocrinology Branch, NICHD, are conducting an outpatient evaluation study on depression in adolescents ages 11 through 16. Biological and psychological characteristics of depression will be examined. The study does not involve drug treatment. A group of healthy, non-depressed adolescents is also needed to serve as a comparison group. All individuals will be paid. For more information, call 496-4319. □



TRAINING TIPS

The NIH Training Center of the Division of Personnel Management offers the following:

Courses and Programs *Starting Dates*

<i>Management and Supervisory</i> 496-6371	
Effective Presentation Skills	6/24
Getting Results in Task Oriented Groups	6/26
Managing Behavior in the Work Environment	6/26
Successful Middle Management at NIH	7/22
Applied Creativity	7/23
Conflict Resolution	7/23
Total Quality Awareness	7/30

Office Operations and Administrative

<i>Systems Training</i> 496-6211	
Federal Supply Schedules	7/2
Introduction to Working at NIH for Support Staff	7/1
Proofreading and Editing	7/8
Foreign Travel	7/10
Domestic Travel	7/15
Property Management Information System	7/15
Working With Personal Differences: MBTI Applications and Individual Development	7/17
Basic Time and Attendance	7/19
Buying From Small and Large Businesses on the Open Market	7/16
Delegated Acquisition Training Program	7/22
Consolidated Purchasing Through Contracts	7/25
Quality Writing I	7/29

<i>Science and Medical</i> 496-6211	
Medical Terminology I	7/3

<i>Special Courses</i> 496-6211	
Basic Employee Relations	7/24
Appropriation Law Seminar	6/24
Break the Smoking Habit	7/11

The NIH Training Center, DCRT and other training information is available on WYLBUR. Logon to WYLBUR and type ENTER TRAINING

NIDR's Anthony Rizzo Dies

Dr. Anthony A. Rizzo, 62, a periodontist and science administrator with the National Institute of Dental Research, died suddenly of a heart attack Apr. 20 in Mexico, while attending a meeting of the International Association of Dental Research.

Rizzo, who lived in Kensington, was chief of the Periodontal and Soft Tissue Diseases Research Branch, NIDR. He had been with the institute since 1957, holding a broad range of positions in both intramural and extramural programs.

He devoted the first 11 years of his career to laboratory research on periodontal diseases and oral viruses, eventually becoming assistant to the director of intramural research. In 1968, he joined the Extramural Program and served successively as chief of the Biomaterials Program, chief of the Periodontal Disease Program, special assistant for program coordination, and deputy associate director. In addition to the positions he held at NIDR, he was a 33-year member of the Public Health Service until he retired from the Commissioned Corps in December 1990.

Rizzo was a visiting scientist at the Royal Dental College in Aarhus, Denmark, and a visiting lecturer at Howard University School of Dentistry. He was a member of the International Association for Dental Research, Delta Sigma Delta and a charter member of the Greater Washington Periodontal Society. In 1988, he received the PHS Outstanding Service Medal.

A native of Birmingham, Ala., Rizzo



Dr. Anthony A. Rizzo

attended Birmingham-Southern College, from which he received a degree in English in 1951. In 1956, he received his dental degree from the University of Alabama School of Dentistry, having served as editor of the *Alabama Dental Review* in his final year. He also completed a residency in periodontology and earned a master's degree in pathology from the University of Alabama Graduate School.

Survivors include his wife, Teresa Hamm Rizzo; two children from his first marriage, David M. Rizzo and Patricia L. Rizzo; and three children from his second marriage, Michael A. Rizzo, Jonathan E. Rizzo, and Daniel J. Rizzo.

NHLBI's Microcomputer Resource Volunteers Recognized

Microcomputer resource volunteers of the National Heart, Lung, and Blood Institute were recognized at a ceremony and luncheon sponsored by the Office Automation Systems Branch (OASB), OPPE, at the Women's Club of Bethesda recently. Institute director Dr. Claude Lenfant presented certificates of appreciation to those volunteers who so generously give a substantial amount of their time to provide guidance and support to NHLBI microcomputer users.

Certificates were presented to 29 WordPerfect resource volunteers for their support during the NHLBI upgrade to WordPerfect 5.1. The stellar certificate was presented to 23 special individuals for their outstanding commitment and dedication in promoting the understanding of microcomputer technology. The OASB also extended a special thanks to all of the microcomputer volunteers for their support during the past year and looks forward to their continued support in the future.



Dr. Claude Lenfant (seated, front row, l), presented certificates of appreciation to (front row, from l) Nancy Poole, Sandy Kamisar, Rose Blondell, Diane Putney, Laura Hall; (second row, from l) Felipe Coffman, Douglas Boyd, Lafayette Gilchrist, Douglas Wood, Charlene French, Naomi Josloff, Shirley Cox, Deloris Gilmore; (top row, from l) Eileen Wright (chair), Dr. Russ Price, Ralph Van Wey, Kathleen Welch, Edward Lewis, Loretta Layton, Christinia Roark, Christiane Mahan, Miriam Spiessbach (chair).

Zack Strange's Australia Wish Comes True

Zack Strange, who likes to give his age as 12½, heard the call of Australia several years ago. Maybe it was the wildlife programs he loves to watch on television—it was definitely the movie *Crocodile Dundee*, with its intrepid Australian hero. Zack, the son of Thomas M. "Mike" Strange of NIEHS' Facilities Engineering Branch, and his wife Vickie, has hemophilia. Through a blood transfusion, Zack was exposed to the human immunodeficiency virus and developed AIDS. But Zack's health troubles do not keep him from dreaming big. So when he was contacted at the Duke University pediatric clinic and offered the chance to get something really special through the Make-A-Wish Foundation, he knew Australia was his heart's desire. Zack



Zack Strange, son of an NIEHS employee, learned about Black Australians, the original people of Australia, directly from these people at a cultural center where material about their history and culture is presented for visitors.

told the Make-A-Wish people about his dream in a phone conversation from the clinic, and 2 hours later they called him back to tell him to make his plans for the trip—he was going to Australia.

During March, Zack and his parents spent 2 weeks "down under" visiting Sydney and journeying north to Cairns to see the Great Barrier Reef. Zack met members of the original Black Australians, and encountered kangaroos in their own habitat.

In addition to his experience with world travel, Zack has had something of a media career, including an appearance on the nationally syndicated *Donahue* show as well as appearances on WRAL-TV, the CBS affiliate in Raleigh, N.C., on which he talked about the problems of young people coping with AIDS. Zack feels strongly about the need to educate the public for improved understanding about the disease.—Thomas R. Hawkins



Zack, a North Carolina pediatric hemophilia patient who contracted AIDS, meets three inquisitive kangaroos as he fulfills his dream of visiting Australia, a trip made possible by the Make-A-Wish Foundation.

GSA To Present Forum on Contracts

The General Services Administration will present a forum on mandatory federal supply schedules and nonmandatory ADP and telecommunication schedules. Sponsored by the Delegated Procurement Branch, Division of Procurement, it will take place on June 10 from 9:30 to 11:30 a.m. in Masur Auditorium.

Issues to be discussed include fair and reasonable price; competitiveness; small business versus large business; recent GAO decisions; FAR changes affecting schedules; multi-year contracting; the automated product listing services; difference between mandatory and nonmandatory schedules; brand name versus functional descriptions; and ADP purchases under \$25,000.

Speakers include Gloria Robinson, GSA customer service representative for NIH; Stella Johnson, procurement analyst, Contract Clearance and Schedules Policy Division, GSA; and Mary Moran, chief of the Planning and Review Branch, Office of Information Resources Procurement, GSA. The presentations will be followed by a question and answer period.

The forum is open to all NIH staff involved in small purchases including purchasing agents, procurement assistants, administrative assistants and administrative officers. No advance registration is required. For further information, contact the Office of the Assistant Director for Small Purchase Policy and Oversight, EPS, Rm. 850, 496-6071. □



Myron Gorham (l) and Dave Bryant stand beside a dumpster filled with 20,000 pounds of paper—the amount collected in Bldgs. 31C and 1 after 5 weeks of a pilot program for white paper recycling. The dumpster's contents represent 179 trees saved. From here the paper goes to a paper stock company that bales it and sends it to a paper mill. The NIH Pilot Recycling Project collects only white paper of the following kind—computer paper, letterhead, memo, photocopy and typing paper. Money collected from recycling is credited to the general waste collection contract and used to offset NIH's landfill disposal costs, with resulting reductions in overhead costs. The Environmental Protection Branch, Division of Safety, which is sponsoring the project, anticipates that it will be launched campus-wide during fiscal year 1992.